1125-35-1268 **Elodie Pozzi*** (elodie.pozzi@math.u-bordeaux.fr), Institut Mathématiques de Bordeaux, France. *Hardy Smirnov spaces of pseudo-analytic functions.*

Let $\Omega \subset \mathbb{C}$ be a domain bounded by a rectifiable Jordan curve, $\phi : \mathbb{D} \longrightarrow \Omega$ a conformal map and $1 < p < \infty$. We study a class of functions that are solutions in the distributional sense of $\overline{\partial} w = \alpha \overline{w}$ with $\alpha \in L^2(\Omega)$ satisfying

$$\sup_{0<\rho<1} \int_{\Gamma_\rho} |w(z)|^p |dz| < \infty,$$

where $\Gamma_\rho = \phi(\mathbb{T}_\rho)$. In this case, we say that w belong to $\mathcal{F}^p_\alpha(\Omega)$. For $\alpha = 0$, such functions belong to the (analytic) Smirnov space $E^p(\Omega)$. We will give some properties of $\mathcal{F}^p_\alpha$-functions and will give the definition of the trace of w denoted $w_{\partial\Omega}$. For $\psi \in L^p_{\mathbb{R}}(\partial\Omega)$, we will prove that there exists $w \in \mathcal{F}^p_\alpha(\Omega)$ such that $\operatorname{Re} w_{\partial\Omega} = \psi$. This result will permit us to solve the Dirichlet problem for $\operatorname{div}(\sigma \nabla u) = 0$ for $\log(\sigma) \in W^{1,2}(\Omega)$ with boundary data $\psi \in L^p_{\mathbb{R}}(\partial\Omega)$ and under some assumptions on Ω. This talk is based on joint work with L. Baratchart and E. Russ. (Received September 15, 2016)